DOCUMENT RESUME

ED 217 656 EC 142 741

AUTHOR Altman, Reuben
TITLE Studying the Learning Disabled Adolescent through Epidemiological and Intervention Research Tactics.
INSTITUTION Kansas Univ., Lawrence, Inst. for Research in Learning Disabilities.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
REPORT NO IRLD-Mono-1
PUB DATE Jan 80
CONTRACT 300-77-0494
NOTE 15p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adolescents; *Educational Research; History; *Learning Disabilities; Research Design; *Research Methodology; Secondary Education; Trend Analysis

ABSTRACT

The paper examined the relationship between epidemiological and intervention research with learning disabled adolescents. Several historical trends and contemporary issues (e.g., the importance of prevention as opposed to treatment efforts, applied versus basic research, continuing questions related to definition and identification, and heterogeneity of the population) which effect research in learning disabilities are discussed. The author advocated the simultaneous and interactive pursuit of epidemiology and intervention research. (Author)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED217656

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES
The University of Kansas
Lawrence, Kansas, 66045
Emphasis on Adolescents and Young Adults

STUDYING THE LEARNING DISABLED ADOLESCENT THROUGH EPIDEMIOLOGICAL AND INTERVENTION RESEARCH TACTICS

Reuben Altman

Research Monograph No. 1

Dr. Altman is a faculty member in the Department of Special Education, University of Missouri-Columbia.

January, 1980

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Reuben Altman
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EC142741

The University of Kansas Institute for Research in Learning Disabilities is supported by a contract (#300-77-0494) with the Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, U.S. Office of Education, through Title VI-G of Public Law 91-230. The University of Kansas Institute, a joint research effort involving the Department of Special Education and the Bureau of Child Research, has specified the learning disabled adolescent and young adult as the target population. The major responsibility of the Institute is to develop effective means of identifying learning disabled populations at the secondary level and to construct interventions that will have an effect upon school performance and life adjustment. Many areas of research have been designed to study the problems of LD adolescents and young adults in both school and non-school settings (e.g., employment, juvenile justice, military, etc.).

Co-Directors: Edward L. Meyen
Richard L. Schiefelbusch

Research Coordinator: Donald D. Deshler

Associate Coordinator: Jean B. Schumaker

Institute for Research in Learning Disabilities
The University of Kansas
313 Carruth-O'Leary Hall
Lawrence, KS 66045

The preparation of this document was supported by a government contract. The views expressed here are those of the Institute, and do not necessarily reflect official positions of the Bureau of Education for the Handicapped, DHEW, USOE.

ABSTRACT

This paper examines the relationship between epidemiological and intervention research with learning disabled adolescents. Several historical trends and contemporary issues (e.g., the importance of prevention as opposed to treatment efforts, applied vs. basic research, continuing questions related to definition and identification, and the heterogeneity of the population) which effect research in learning disabilities are discussed. With this background, Dr. Altman advocates the simultaneous and interactive pursuit of epidemiology and intervention research.

Studying the Learning Disabled Adolescent Through
Epidemiological and Intervention Research Tactics

The purpose of this paper is to examine the relationship between epidemiological and intervention research with learning disabled adolescents. A number of factors encompassing both historical trends and contemporary issues bear on this discussion. Among these are the relative importance attributed to prevention as opposed to treatment efforts, the dichotomy between basic and applied research, the continuing failure to achieve a professional consensus regarding definition and/or identification criteria, and the inordinate heterogeneity characterizing the population labeled learning disabled.

These issues are so closely interwoven in their research implications, that their impact on the status of learning disabilities research does not readily lend itself to independent evaluation. In fact, the difficulty of explicating discrete issues may itself reflect the more pervasive problem underlying learning disabilities research. The position taken in this paper is that the field of learning disabilities, in general, and its research, in particular, has been hampered by an effort to utilize models generated from such seemingly analogous areas of investigation as mental retardation.

The discussion which follows endeavors to present a holistic view of these issues as they interact to influence research in learning disabilities. In addition, the erroneous extrapolation of systems and theories from other areas of special education is

identified as a significant deterrent to progress in this field. Finally, as derived from these considerations, this paper views the simultaneous and interrelated conduct of epidemiological and intervention studies as a critical feature underlying progress in learning disabilities research.

Prior to other considerations, the emphasis within the Institute on research with adolescents and young adults merits specific attention. The evolution of interest in learning disabilities has been dominated by efforts in behalf of young school-age children. The disproportionately greater attention to the younger learning disabled child is premised on the rationale that early identification will lead to interventions that may circumvent the otherwise deleterious sequence of school experiences producing academic failure and secondary behavioral concomitants. Thus. we observe a prevention as opposed to treatment orientation at this level. In fact, to the degree that progress has been forthcoming in the area of learning disabilities, the beneficiaries generally have been preschool and elementary-level children and their teachers. This is perhaps best evidenced by the availability of a relatively large number of screening instruments, diagnostic batteries, and instructional materials geared specifically to the presumed needs of young learning disabled children.

Concurrent with the proliferation of such materials, which stem from a variety of professional viewpoints concerning the nature of learning disabilities, is the widespread recognition of the diversity characterizing these children. For example, a learning disabled child who manifests a problem in apraxics may indeed benefit from a

prescribed regimen of gross-motor training. Independent of any assumption of neurological association between muscular integrity and academic performance, the possibility of secondary emotional consequences influencing school performance is well documented among physically handicapped youngsters. Whether the motor training influences cognitive skills or merely ameliorates affective conditions inhibiting school success, it holds remedial value for some children. Similarly, a learning disabled child who presents particular language irregularities will likely respond positively to properly designed linguistic remediation. Thus, this complex of presenting symptoms, remedial techniques, and diagnostic and instructional materials serve to remind us that "learning disability" is an arbitrary designation for a variety of conditions associated with problems in school performance.

Yet, as interest in recent years has grown to encompass secondary-level students, we tend to address this older population as though some actual homogeneity or real narrowing of focus has occurred. In fact, given the relatively recent advent of our interest in the adolescent and young adult learning disabled and the concomitant lack of experience in identification and diagnosis at this level, we likely are identifying an even greater diversity of conditions than with younger children. In any case, the result is a tendency to treat the secondary learning disabled population as though there were a professional consensus communicated by the label. While we can now communicate effectively relative to age designations, we are not nearly as able to do so relative to the nature of the population at that age. This is a particular problem

for research purposes where the generalizability and overall value of the research is largely dependent upon our ability to extrapolate from an individual study's subject sample to the population as a whole.

Perhaps this point also evidences the fallacy inherent in viewing the adolescent learning disabled population as comparable for research or any other purpose to a group defined by an alternative handicapping condition such as mental retardation. While a randomly selected sample of retarded adolescents will exhibit variability in physical, affective, and cognitive attributes, such variability is not likely to be as great as that evidenced by a group of similarly selected learning disabled adolescents. In addition, the variance in attributes, particularly those most pertinent to learning and academic skills, can be further reduced within a sample of retarded adolescents by specifying a particular IQ and/or MA range. No corresponding variable exists for delimiting with the same degree of objectivity a sample of learning disabled adolescents relative to their handicapping condition.

Thus, for example, while research with moderately retarded subjects may indeed be viewed as systematically contributing to the generation of a knowledge base relative to one or more attributes of this population, e.g., short-term memory, reaction time, problem solving, or fine motor skills, a comparable assertion cannot be made in regard to research in learning disabilities. There is no equivalent single group referent conveyed or represented by the term learning disabled. Stated another way, while we would anticipate high generalizability of data across samples of retarded youngsters at varying

geographic sites (enabling cumulative advances in research), we could not as confidently generalize data across independently selected samples of learning disabled youngsters (given the overriding diversity in definition and identifying criteria).

It was previously noted that one of the major issues underlying the status of research in learning disabilities was the juxtaposition of preventive vs. treatment efforts. This distinction is, in fact, rooted in and cannot be separated from one of the earliest controversies to face the field of learning disabilities. What we now connote under the rubric learning disability was referred to by a variety of terms typically synonymous to "minimal brain dysfunction" in the early part of the last decade. The influence of an early medical orientation and a history of investigation into organic pathology is self-evident here.

More significant, however, was the medical model's orientation toward a particular etiology, i.e., neurological impairment, as the major defining variable. Thus, at that point in time, we were purporting to address a population of youngsters who were not globally retarded (normal or higher IQ became an integral component of each of the earliest definitions), but who were nonetheless educationally handicapped due to organic impairment. In addition, a variety of behaviors associated with this syndrome concept surfaced including various notions related to hyperactivity, e.g., impulsivity, short attention span, hyperkinesis, and emotional lability. As classes formed to provide special services to these children, educators focused their identification criteria on these behavioral concomitants and, consequently, many of the children identified failed upon neurological examination to evidence indices of organicity.

Rather than reevaluate the concept of their identification criteria, educators forged ahead with categorization by exclusion (i.e., not retarded, not emotionally disturbed, not sensory impaired, thus minimal brain dysfunction). They rapidly proliferated special classes and soon dropped the neurological implications altogether resulting in the now commonly accepted label of learning disability. The rationale typically provided for the shift from a neurological (etiological) perspective was that our concern and responsbility as educators was to remediate symptoms independent of their etiology. Thus, as a function of the effort to justify the inclusion of an essentially undefined pupil population under the learning disability classification, an artificial dichotomy between etiology and symptomatology evolved.

It is essential for contemporary researchers as well as graduate students training for research positions in learning disabilities to be apprised and perhaps periodically reminded of such historical issues and as of yet unresolved questions. It is not surprising to find that researchers with training and experience in related fields such as mental retardation approach learning disabilities research as though they were working with some comparably distinct population. To some degree this is a function of our own zeal to establish an independent turf through authenticating a target population, providing educational services and generating research hypotheses. This process quickly becomes self-sustaining and is likely enhanced by the well intentioned but somewhat naive support of colleagues in related fields who lack sufficient grounding in learning disabilities per se.

The historical distinction between etiology and symptomatology is valid in terms of the differentiation implied by the two terms with etiology relating to cause and symptomatology relating to manifestations. The non sequitur occurs in the implication of mutual exclusiveness which ultimately came to influence current learning disability practice. Clearly, we can and should be concerned with both etiology and symptomatology. The dissociation between the two implies an analagous division between prevention and treatment efforts, which in turn implies an equally questionable dichotomization of epidemiology and intervention. In fact, none of these pairs are, should, or need be treated as though mutually exclusive. Clearly, research can progress simultaneously on the treatment of symptoms and on the prevention of known etiologies.

In addition, it is through research on both epidemiology and intervention that we progress in each of the other areas. That is, it is through epidemiological investigations that we document regularity in symptoms which guides the search for treatment as well as causation, which in turn, determines, or at least suggests, preventive measures. In addition, given the heterogeneity of the learning disabled population, particularly at the secondary level, successful interventions must be tied to the specification of characteristics of the particular sample experiencing the intervention in order to be replicable. Such a specification of variables is epidemiological.

Furthermore, an ultimate research goal in learning disabilities continues to be the establishment of early interventions designed to effect preventions. Such a prevention approach mandates the utility

of prediction criteria or the ability to determine that a given child is high risk for the condition prior to the appearance of confirming manifestations. The perfection of such prediction techniques is dependent upon success in relating an as-of-yet undetermined combination of variables to the defining symptoms. Such research is statistically correlational and methodologically epidemiological.

Another point of view supports the concurrent and interactive pursuit of epidemiological and intervention research. The very fact that we have yet to determine the definitive traits of those individuals most suitably served through learning disability service delivery models argues in support of continuing epidemiological research. Simultaneously, because we have identified and placed large numbers of children and youth in special class settings, by whatever criteria are in use, we have a continuing responsibility to provide appropriate educational services to the best standards our knowledge permits. The very heterogeneity of the population involved complicates decisions relative to the design and delivery of such quality services. Thus, research on the relative efficacy of alternative interventions with the various subpopulations defined by our epidemiological advances, simultaneously merits a high priority.

Finally, like other emerging areas in special education, the area of learning disabilities has tended to rely on existing expertise within the broader field of special education during the early stages of its development. As an analogy, recent interest in the area of the severely handicapped created primary reliance on those special educators with experience with the trainable mentally retarded. Frequently, we witness educators applying instructional techniques

and curriculum content which are "watered-down" versions of those in use with the higher-level retarded. This practice is questionable in a field which has long ago recognized the inappropriateness of such extrapolations and has invested heavily in the research and development of unique methodologies for specially tailored curricula. So too, research in learning disabilities must first address those problems unique to and generated from within the learning disabilities area. Despite the temptation to replicate the long history of basic and applied research on mental retardation, the problems may not be appropriate and the solutions may not be applicable.

As an added point, the noted distinction between basic and applied research must be considered in light of the above discussion. At a point in time when this field is still grappling with accuracy in definition, past and continuing identification excesses, and controversy relative to efficacy of alternative instructional methodologies, any research conducted is necessarily basic in nature with only potential for application. Given the relatively primitive state of the art in learning disabilities, even a study exploring the efficacy of alternative interventions in instructional settings is nonetheless "basic." It should not be surprising to us that our theoretical literature, published research results, and communications at professional gatherings are frequently marked by controversy, if not heated debate. In contrast to comparable interchange in mental retardation, deaf education, or the field of visual impairment for example, we are yet to evolve a degree of objectivity enabling even assurance of commonality in target population. Thus, two diametrically opposed theoretical positions in learning disabilities may often

simultaneously possess merit simply because they evolved from clinical or research investigations with disparate target populations both labeled learning disabled.

#1

RESEARCH REPORT MONITORING FORM

Date Completed

Research Report/Article Epidemiology & Intervention Research w/ LD Adol.

Author(s) Altman

Reader(s)

Edited by

Typed by

Proofed by

Copied

Bound

Number Bound 40